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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/672,912	09/26/2003	William D. McKay	RBD-116-A	9191

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EXAMINER

GRAHAM, GARY K

ART UNIT	PAPER NUMBER
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1744

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/18/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

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Office Action Summary	Application No. 10/672,912	Applicant(s) MCKAY, WILLIAM D.	
	Examiner Gary K. Graham	Art Unit 1744	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 January 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5, 12, 14-17, 19 and 22-31 is/are pending in the application.
- 4a) Of the above claim(s) 3 and 19 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 4, 5, 12, 14-17 and 22, 23, 26, 27, 30 and 31 is/are rejected.
- 7) ☒ Claim(s) 24, 25, 28 and 29 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 April 2007 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>20030926 & 20041124</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

Applicant's election without traverse of the figure 1 species in the reply filed on 29 January 2007 is acknowledged. Applicant notes that claims 3 and 19 are readable on the elected species. However, upon review of claim 3, it appears such is directed to the figures 9-12 embodiment as it is here that the flexible connector is carried in the arm. The elected figure 1 embodiment does not appear to have the flexible connector carried in the arm. In claim 19, it appears such is directed to the figure 5 embodiment as it is directed to the folds. Accordingly, claims 3 and 19 has been withdrawn from further consideration as directed to a non-elected embodiment. Clarification is requested.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 3, 5 and 12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 3, line 2, there is no antecedent basis for "the flexible portion" and "the arm".

In claim 5, line 4, there is no antecedent basis for "the arm" and "the shaft".

In claim 12, line 1, reference to claim 11 is improper since claim 11 has been cancelled. The claim has been treated as though it depends from claim 1.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2, 4, 5, 12, 14, 15, 16, 17, 22, 23, 26, 27, 30 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over McKay (US patent 6,405,403) in view of Forbes et al (US patent 1,982,910).

The patent to McKay discloses the invention substantially as is claimed, including a cleaning apparatus (fig.9) having a handle (12), a mop head (14) with upper and side arms coupled to the handle and rotatably supporting a spindle (112,114) with a cleaning element wrapped thereon. The spindle is defined by circular strips (114) extending between end caps (112).

The patent to McKay discloses all of the above recited subject matter with the exception of a flexible connector between the handle and the head permitting movement in one direction more than another substantially perpendicular direction, mating threads joining the handle with a shaft and resilient material on the handle and head.

The patent to Forbes discloses a cleaning apparatus that includes a flexible connector between a handle (12) and head (13) to allow for movement of a cleaning element (14) in one direction more than another substantially perpendicular direction. The connector includes a flat spring (30) and coil spring (17), which defines spaced segments. The connector also includes a shaft (15) for coupling the connector and thus the head with the handle (12).

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It would have been obvious to one of skill in the art to provide the apparatus of McKay with a flexible connector between the handle and the head, as clearly suggested by Forbes, to enable flexible motion of the head within a single plane such that cleaning under furniture is improved.

With respect to claim 15, while Forbes does not disclose the particular attachment of the handle with the shaft, use of mating threads would have been obvious. Mating threaded connections are well known and established in the art to couple handles with ferrules or shafts of a cleaning head. It would have been obvious to one of skill the art to employ mating threads between the handle of the modified McKay apparatus as is well known, to enable ready detachment of the handle for storage or replacement.

With respect to claims 16, 17 and 23, while McKay does not disclose resilient material on the handle or head, to do so would have been obvious to one of skill in the art. Use of resilient material to act as bumpers or guards to prevent damage when using a cleaning apparatus is well known. It would have been obvious to one of skill in the art to provide the head and handle of McKay with resilient material thereon, as is well known, to act as a bumper for the prevention of damage to structure when using the cleaning apparatus of McKay.

Claims 1, 2, 4, 5, 12, 14, 15, 16, 17, 22, 23, 26, 30 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Popeil (US patent 3,699,603) in view of Forbes et al (US patent 1,982,910).

The patent to Popeil discloses the invention substantially as is claimed, including a cleaning apparatus (figs.6,7) having a handle (11), a mop head (12) with upper (19) and side arms (21) coupled to the handle and rotatably supporting a circular spindle (36) with a cleaning element (40,52) thereon.

The patent to Popeil discloses all of the above recited subject matter with the exception of a flexible connector between the handle and the head permitting movement in one direction more than another substantially perpendicular direction, mating threads joining the handle with a shaft and resilient material on the handle and head.

The patent to Forbes discloses a cleaning apparatus that includes a flexible connector between a handle (12) and head (13) to allow for movement of a cleaning element (14) in one direction more than another substantially perpendicular direction. The connector includes a flat spring (30) and coil spring (17), which defines spaced segments. The connector also includes a shaft (15) for coupling the connector and thus the head with the handle (12).

It would have been obvious to one of skill in the art to provide the apparatus of Popeil with a flexible connector between the handle and the head, as clearly suggested by Forbes, to enable flexible motion of the head within a single plane such that cleaning under furniture is improved.

With respect to claim 15, while Forbes does not disclose the particular attachment of the handle with the shaft, use of mating threads would have been obvious. Mating threaded connections are well known and established in the art to couple handles with ferrules or shafts of a cleaning head. It would have been obvious to one of skill the art to employ mating threads between the handle of the modified Popeil apparatus as is well known, to enable ready detachment of the handle for storage or replacement.

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With respect to claims 16, 17 and 23, while Popeil does not disclose resilient material on the handle or head, to do so would have been obvious to one of skill in the art. Use of resilient material to act as bumpers or guards to prevent damage when using a cleaning apparatus is well known. It would have been obvious to one of skill in the art to provide the head and handle of Popeil with resilient material thereon, as is well known, to act as a bumper for the prevention of damage to structure when using the cleaning apparatus of Popeil.

Allowable Subject Matter

Claims 24, 25, 28 and 29 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

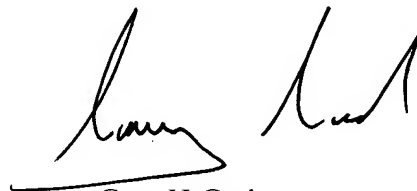
The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gary K. Graham whose telephone number is 571-272-1274. The examiner can normally be reached on Tuesday to Friday (6:30-4:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gladys J. Corcoran can be reached on 571-272-1214. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

A handwritten signature in black ink, appearing to read 'Gary K. Graham', with a long horizontal stroke extending to the left.

Gary K Graham
Primary Examiner
Art Unit 1744

GKG
16 April 2007